

CAL STATE FULLERTON ECONOMIC OUTLOOK AND FORECASTS

SPRING FORECAST 2018

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US NATIONAL OUTLOOK

Overview: Juiced Up, But Also More Fragile

Willie: "You're going to get killed chasing after your damn fortune and glory"

Indiana Jones: "Maybe ... but not today"

—Indiana Jones and the Temple of Doom

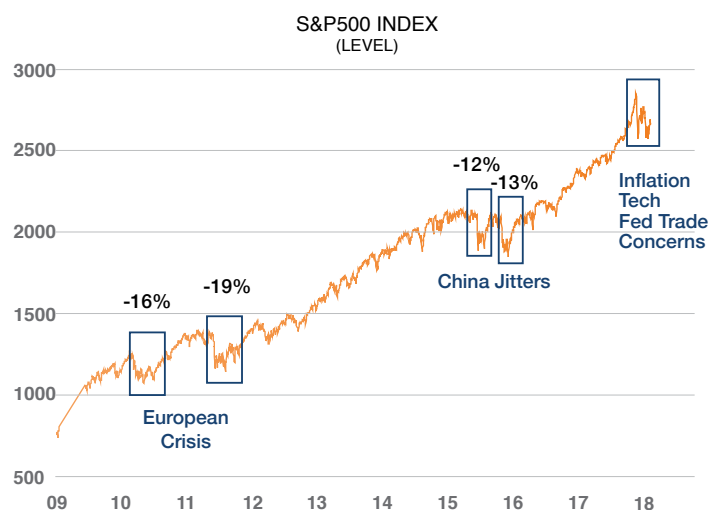
2017 was a remarkable year. Stock markets around the globe soared, volatility was at historical lows, inflation remained subdued, and monetary policy continued to remain accommodative across the world. Of the 192 countries tracked by the IMF, 179 posted positive growth rates, the most on record. All of the 45 OECD economies (a club of rich countries) grew in 2017 with almost two thirds registering faster growth than the previous year. The global economy blasted an annualized pace of 3.7% last year, a half of a percentage point (ppt) above its 2016 rate and the fastest pace since 2011. Barring a weak first quarter, the U.S. economy grew by an average of 3% in each of the remaining three quarters of 2017, a first since the start of the recovery.

Alas, 2018 has ushered in a dourer mood. Retail sales slumped for the third straight month in February, vehicle sales have plateaued, construction took a step back earlier this year and home sales continue to struggle. Elsewhere in the world, industrial production took an unexpected tumble in February in a number of advanced economies, plunging by 1.6% in Germany and by 2% in France.

More importantly, market volatility is back with a vengeance as if making up for lost time last year when it was conspicuously absent. The S&P500 dropped a whopping 10% in February from an all-time high in late January, and even though much

of this has reversed, as of this writing, the market is flat having erased all gains for the year (Figure 1). A raft of issues seems to have set investors on edge: Back in February, a higher-than-expected inflation reading spiked fears of a faster tightening by the Fed which sent the 10-year note sharply higher (to 2.9%) and the stock market sharply lower (down by 4% in a single day). Then came trade concerns, first in the form of U.S. tariffs on steel (25%) and aluminum (10%) imports followed by 25% tariffs on some 1,300 Chinese products. A day later, China retaliated with its own list covering 106 categories, rattling markets on concerns that a trade war is imminent. Nerves were frayed further on worries about a rout in the tech (e-commerce) sector, which lost a combined \$400 billion in market valuation in just under three weeks. Fears are intensifying that the synchronized global upswing of 2017 may turn into a synchronized global stall in 2018.

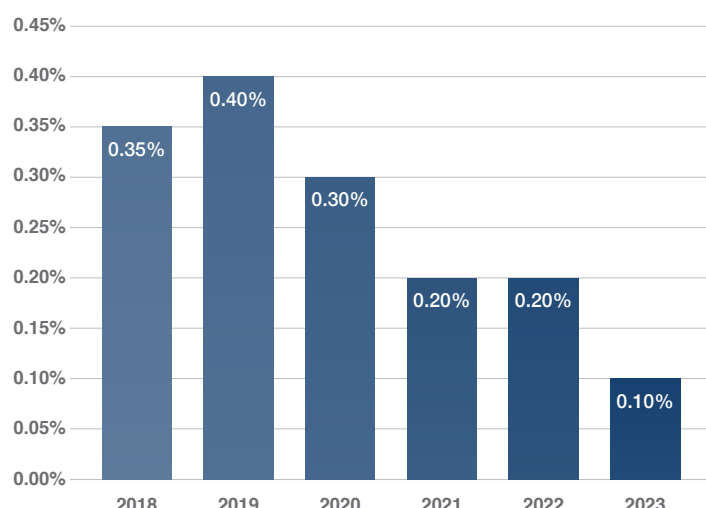
FIGURE 1
Stock Market Volatility Has Shot Up in 2018



Our view is that market hysteria on a number of these issues is overdone, at least at this point. While risks are elevated compared to a year ago, we expect the economic expansion to continue apace in the U.S. and the rest of the world this year and the next. The economic backdrop is solidly positive and fundamentals point to continued, and in our view, amped-up growth in the short-term. Consumer and business sentiment is at an all-time high, labor markets continue to tighten, wages and income have picked up and home valuation are back to their pre-recession peaks. Business investments have roared back after a slump in 2015 and 2016, growing by 8.2% in the fourth quarter of 2017. S&P500 companies are set to report earnings growth of 17% in Q1 2017, the highest since the first quarter of 2011.

Fiscal policy is set to add more fuel to the growth outlook in the short run. The recently enacted tax package is expected to ramp up consumer spending and business investments, adding 0.35 ppt to growth this year and 0.4 ppt in 2019 (Figure 2). The sweeping omnibus funding bill passed by Congress in March will further contribute to the short-term outlook by lifting the spending caps of the Budget Control Act of 2011 by nearly \$300 billion. About 55% of this increase will go to defense spending. The deal also suspends the debt ceiling until March 2019 and earmarks \$89 billion supplemental funding for disaster relief.

FIGURE 2
Tax Reform Impact on Economic Growth
(percent annual increase in Real GDP)



The return of volatility is nothing short of normal at this stage of the business cycle. In fact, as we have argued previously, its absence last year was an abnormal phenomenon, spawned primarily by the extraordinary central bank liquidity sloshing around the world in the early and mid-stages of the recovery. The vast amount of liquidity made it easier to navigate financial and macroeconomic risks, smoothing edges and sidestepping rough corners. However, as the transition to a less accommodative monetary policy continues and potentially ramps up, some repricing of risk is certainly expected especially as fundamentals become the primary drivers of valuations. Higher volatility and periodic advances and retreats in equity markets are expected to characterize the investment horizon this year and the next. A correction on tech stocks is also not entirely surprising given their meteoric rise over the past few years and the myriad of problems that have recently beset the sector. Internet commerce stocks soared 624% in seven years, reaching an astounding market cap of \$6.4 trillion as of March of this year, exceeding the entire market capitalization of Eurozone. Extremely rich valuations may have spurred some needed correction and profit-taking in the sector. But a variety of negative news also did not help: The specter of regulation looms large after concerns about Facebook privacy took center stage in early April. Production issues, testing accidents, product redesign and user numbers have also contributed to some of the troubles of this sector in the first quarter of the year. However, their first quarter earnings came strong, putting some of the concerns to rest, at least for the time being.

Escalating trade tensions have certainly cast a pall on the outlook, but our view on this is more sanguine than the consensus. Even the staunchest supporters of free trade (such as ourselves) would agree that China's approach to trade has been consistently underhanded and less than fair. The "Made in China 2025" plan – a blueprint for the country to develop its own global competitors in fields from information technology to electric cars – relies heavily on coddling domestic firms, increasing trade barriers and pressuring foreign companies to hand over technology and intellectual property in exchange for access to Chinese markets. Though the tariffs proposed by the administration are a rather blunt tool to address these very complex issues, at this point they appear to be means to prod China to the negotiating table rather than the end-game. Indeed, the end result may actually be freer and fairer trade. Similarly, NAFTA renegotiations may lead to a much-needed modernization of the quarter-century old pact.

The real risk to the outlook, in our view, is monetary policy. Make no mistake about it: We are now in a new regime, having transitioned to a higher-growth, higher-inflation, higher volatility environment from an earlier regime when all three were repressed. The significant dose of fiscal stimulus administered this year, both in the form of tax cuts and spending increases should juice up the economy further at a time when economy is already at (near) full employment. While we don't think the economy is overheating, at least not yet, things are certainly heating up. With inflation and growth likely surprising on the upside for the balance of the year, we anticipate the Fed to tighten faster than what markets expect: four rate hikes this year and four in 2019. Faster monetary tightening, which is typical in the late stages of an expansion, coupled with a waning of fiscal stimulus in early 2020, will greatly increase the odds of a recession, or at a minimum, bring the expansion to a screeching halt.

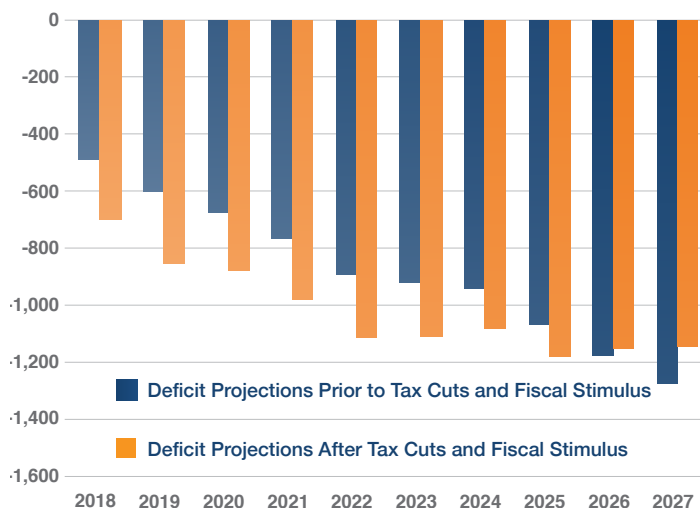
Other concerns have also surfaced, as it is common at this late stage of the business cycle, especially regarding potentially overextended pockets of the economy. Indeed, certain corners of the economy appear overstretched: Commercial real estate values have appreciated by a staggering 87% since the end of the recession, financial valuations are certainly rich, student and auto loans have reached \$2.6 trillion, and the personal savings rate fell to its lowest level since prior to the recession in December 2017. While we are closely monitoring these developments, our view is that these overextended sectors do not yet pose a significant threat to the expansion. Besides, some needed correction has already occurred: Stock market valuations are not as expensive as they were back in January after ceding some gains, commercial prices have plateaued over the past few months, student and auto loans constitute only a fraction of mortgage markets, and the savings rate has ticked up in the first two months of this year.

The real threat to long-run growth is the federal debt, which has ballooned faster than originally anticipated with the passage of the Tax Cuts and Jobs Act and the omnibus spending bill (Figure 3). However, fixing the massive debt and chronic deficit problems would require political will and courage to tackle hard-do-deal-with programs such as Social Security, Medicare and Medicaid. Nonetheless, entitlement reform is politically unpalatable, which is why we don't expect any meaningful changes to occur anytime soon.

Going forward, we expect the real GDP to grow by a solid 2.8% this year and 2.9% in 2019, boosted by strong fundamentals and a nearly-unprecedented dose of fiscal

FIGURE 3

Tax Cuts and Fiscal Stimulus Will Add to the Deficit (federal deficit, billions of dollars) (percent annual increase in Real GDP)



stimulus. If our forecasts bear out and this expansion survives until June 2019, it would be the longest on record, outliving all previous post-war recessions. This expansion is poised to keel over one day, but in the words of Indiana Jones: "maybe ... but not today."

Juiced Up: Strong Fundamentals Amped-up by a Large Dose of Fiscal Support

By and large, consumer spending has been the bedrock of this expansion, even when business investment faltered and fiscal stimulus waned. Consumer spending rose by 2.8% in 2017, far above the more insipid 2.3% growth in real GDP. In fact, consumer spending has outpaced real GDP growth (sometimes by a large margin) in each of the past four years. Momentum was exceptionally strong towards the end of last year when consumer spending rose by a staggering 4% in the fourth quarter of 2017. Holiday sales were the strongest since the end of the recession, up 5.5%, nearing a total of \$700 billion.

The momentum seems to have petered out this year. Personal consumption expenditures rose just 0.2% in both January and February, while retail sales fell for the third straight month. Personal savings rate, which had fallen to an 11-year low in December 2017, ticked up a few notches in the first two months of the year. The weakness in spending was responsible in large part for the slump in the Atlanta Fed GDP-now tracker (which tracks real GDP using high frequency data) from a (uncommonly) high 5.4% (registered on Feb. 1) to a current 1.9%.

Our view is that some of this weakness is temporary and will reverse for the balance of the year. The fundamentals of consumer spending are solid, underpinned by improving household finances, lower personal tax rates, and gains in employment, real disposable incomes, and home values. Moreover, some of the weakness was expected and largely reflect payback for an unusually blockbuster holiday season as well as ramped up consumer expenditures in the aftermath of last year's devastating hurricane season.

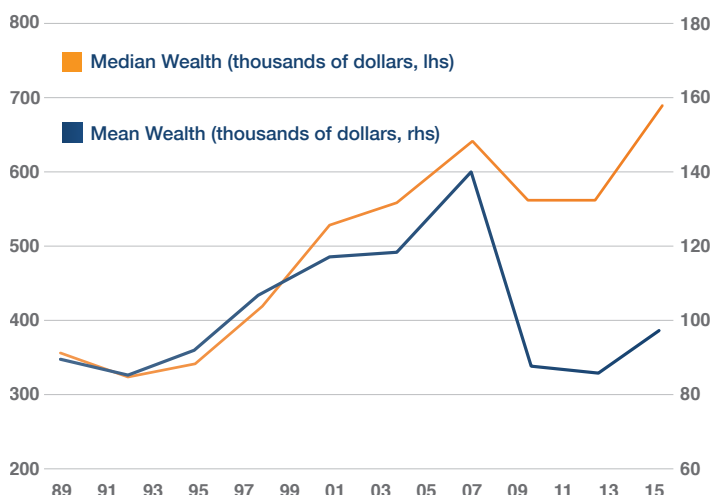
More importantly, consumer sentiment continues to remain at levels last seen at the end of 2000, before the bursting of the dot com bubble. As of the fourth quarter of 2017 (latest available data) household net worth has nearly doubled since the height of the financial crisis, rising from \$54 trillion in Q1 2009 to nearly \$100 trillion. Most of the gains are due to the spectacular rise in equity markets (up \$35 trillion since the trough of the crisis) but housing wealth has also more than made up its losses from the epic collapse during the last recession. Indeed, housing wealth is now nearly \$1 trillion above its pre-recession peak, a fact that has contributed greatly to consumer optimism. Historical estimates suggest that housing wealth has a much higher impact on consumer spending than financial wealth: American consumers spend around 7 cents of each additional dollar in housing wealth, while they spend only 3 cents per additional dollar in financial wealth.

It is worth noting that aggregate numbers do tend to paint a rosier picture of the overall health of consumer net worth since they mask distributional differences. For example, based on the 2016 Survey of Consumer Finances (latest available survey), mean household wealth has rebounded above pre-recession levels only for the top 20% of the income earners. This is also starkly seen by the yawning gap between real mean and median family net worth: While the two tended to move together prior to the financial crisis, they have diverged meaningfully since then, with the mean wealth (pulled up by the top of the distribution) having surpassed its prerecession peak (Figure 4). The good news is that the latest survey shows a broad-based improvement in net worth in all deciles, a trend that we expect will have further expanded in 2017 and will continue in 2018.

Of some concern lately has been the fact that consumer spending has tended to outpace income growth. Real disposable income rose by a dismal 1.2% in 2017 and 1.4% in 2016, far below the pace of consumption growth (2.8% and 2.7%, respectively). Wage growth has also been hard to come

FIGURE 4

Rising Household Wealth is not Evenly Spread
(household wealth, median vs mean, level, thousand of dollars)



by, growing by a paltry 2.5% annualized pace at a time when unemployment rate is the lowest in 17 years. In absence of real income growth, consumers have financed their spending sprees by drawing down savings and racking up debt: Credit card debt has risen to \$830 billion dollars, just a hair below its pre-crisis peak. Auto loans have nearly doubled, while student loans continue their march towards historical highs.

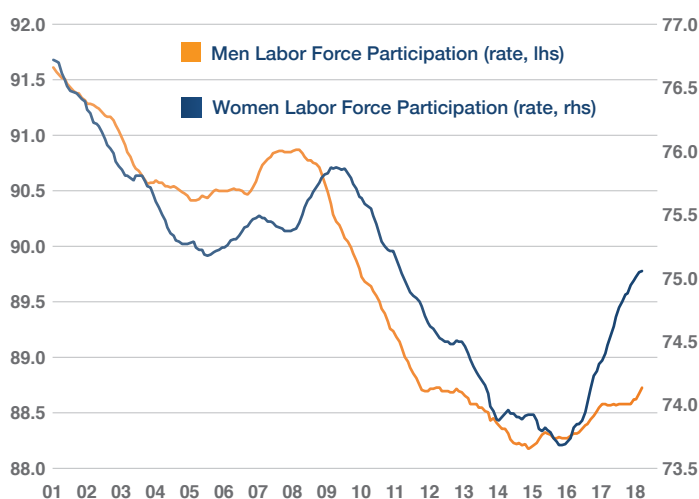
While these developments bear monitoring, our view is that consumer spending will continue to support growth over the forecast horizon, rising by 2.6% this year and 2.7% in 2019. Income and wage growth has ticked up more robustly over the first few months of the year and, as the labor market continues to tighten, further improvements are expected. Consumer balance sheets continue to remain pristine: Household debt service payment and financial obligations as percent of disposable income, though up from a few years ago, remain at historically low levels. Delinquency rates for credit card debt have edged down over the past couple of years and remain well under 8%. And even though auto and student loan delinquency rates continue to remain at cycle highs (4% and 11%, respectively), the combined size of this market is relatively small (\$2.6 trillion), which means that, at present, it poses a much less systemic risk to the economy than the mortgage market did back in 2008.

The labor market has been and continues to remain an unquestionably bright spot over the past three years, adding a total of 2.7 million jobs in 2015, 2.3 million in 2016 and 2.2 million in 2017. Since the start of the expansion, the economy has added a total of 18.5 million jobs – a remarkable

feat – which is even more impressive in light of the fact that we are currently in the later phases of the business cycle. Job growth has continued apace this year, with the economy adding on average 200,000 jobs per month, though March's reading, at 103,000, was far below expectations. We expect the labor market to continue to expand over the forecast horizon, albeit at a less rapid clip, adding 175,000 jobs per month this year and 150,000 in 2019.

Another heartening development is the pick-up in labor force participation rate among prime-age workers. Though the rate is still below the heyday of the 1990s, it has risen sharply since reaching an all-time low in the fall 2015, making up half of the ground lost during the recession. The reversal is largely due to an increase in participation rates from prime-age women (up 1.4 ppt), which has vastly outshined improvement in participation rates for prime-age men (up only by a paltry 0.4 ppt) (Figure 5). Nonetheless, the long-awaited turnaround in the prime-age participation rates is a welcome development, especially for the less educated workers whose participation rates have risen the most (though they continue to have the most ground to recoup). The labor market continues to tighten with the unemployment

FIGURE 5
Prime Age Participation has Increased but Mostly due to Women
(labor force participation rate, 25-54 years old)

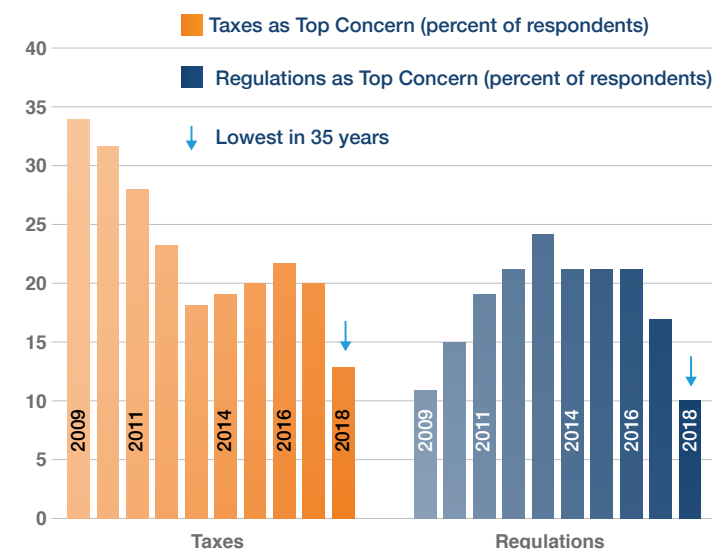


rate hovering at a 17-year low of 4.1% for six straight months. The unemployment rate has not budged lower despite the fact that a total of 1.2 million jobs were created during this period, in large part because the labor force has expanded at a rapid clip. This indicates that labor market slack may be a bit larger than what is signaled by the headline unemployment

rate, though it is being reduced quickly. We expect the unemployment rate to reach 3.8% by the end of this year and 3.6% by the end of 2019.

Business outlook is also much improved. Indeed, business confidence, both large and small, is sky-high: The Duke CFO survey (surveying large corporations) recorded its highest level since its inception in the first quarter of this year. Likewise, the National Federation of Independent Businesses survey (focused on medium and small businesses) reported that small business optimism has only been this high only 5% of the time in its 43-year old survey. Most of the optimism has to do with the recently passed tax passage: Among large corporations 53% of firms say they plan to expand investments due to the lower corporate tax rate while 44% say it is due to the ability to immediately expense investments. For small businesses, taxes are not a major source of concern for the first time in 35 years (Figure 6). But business optimism rides high for a number of other reasons outside the much-improved tax and regulatory environment. A broadly firming economy both at home and abroad, low borrowing costs, declining risk spreads and surging profits paint a robust picture for business outlook both large and small. Over the second half of last year, business fixed investment rose by a solid 5.7% average annual rate. Over the next two years, we forecast business fixed investment to grow 5.8% and 6.3%, respectively, buoyed by recent tax cuts and a broadly firming economy.

FIGURE 6
Taxes and Regulations no Longer Top Concerns for Small Businesses
(percent of respondents, NFIB survey)



This broad-based expansion is further amped up by a large dose of fiscal support. After much wrangling and political maneuvering, the most sweeping rewrite of the nation's tax code was finally signed into law at the end of 2017.

The reform is a mixed bag, managing to simplify taxes in some places while complicating them in others. Most provisions for individuals are temporary and set to expire by 2025, while changes on the corporate side are permanent. On the individual side, the new law retains the seven tax brackets but modifies the rates and the income thresholds. The marginal top rate is reduced to 37% which kicks in at income higher than \$600,000 for joint filers. Most notably, it doubles the standard deduction, from \$12,000 to \$24,000 for joint filers, while eliminating personal exemptions.

Pass-through entities are allowed to deduct 20% of business income limited to either 50% of W2 wages or 25% of W-2 wages plus 2.5% of the cost of tangible depreciable property. The new law also limits or eliminates a number of deductions: for example, state and local income taxes were retained but limited to \$10,000 per year. The popular mortgage interest deduction is retained but limited to loans up to \$750,000 (previous law capped it at \$1 million), while home equity interest rate deductions is eliminated. Other above the line deductions are also axed including things such as moving expense deduction or alimony deduction. However, slews of other deductions were retained including charitable contributions, educator expenses, medical expenses, and student loan interest. The AMT is preserved but dramatically changed with higher exemption amount (\$109,400) and higher phase-out threshold (\$1 million for joint filers).

On the corporate side the most significant change is the reduction in the top statutory rate from 35% to 21%. The law allows for full expensing of short-lived capital investment for five years and then phases out these provisions for the subsequent five years. It caps net interest deduction to 30% of earnings. More importantly it moves from a worldwide system of taxation to a territorial one in which companies headquartered in the U.S., in many instances, do not need to pay taxes on profits earned abroad.

Our view is that the recently enacted tax law will have important implications in the short-run and long-run. We estimate that individual tax cuts will boost the economy in the short run, via increases in aggregate demand, with this effect waning in the outer years of the forecast horizon. However, the corporate tax cut will have a larger impact in the long run by increasing capital formation rate and productivity growth. Overall, we

expect the tax package to boost real GDP growth by 0.35% in 2018 and an additional 0.4% in 2019. Our dynamic scoring of the tax plan also shows that the budget deficit will increase by \$780 billion over the next 10 years as a result of the new law.

Risks: Vulnerabilities Have Increased

While economic growth has strengthened and become more broad-based, risks have also risen. To begin with, the stock market has appeared to be a lot more volatile this year compared to 2017. As of this writing, the S&P500 index is down 9.5% from its all-time peak of Jan. 26.

We view the return of volatility and the recent stock market correction as a healthy development. The S&P500 index had gained a staggering 57% since February 2016 and a remarkable amount of complacency seemed to have set in. During the entire year, the stock market index moved by more than 1% on a daily basis only eight times – far below the historical 25-year average of around 65 times. More importantly, market corrections and increased volatility are expected as we transition from a low-inflation, low-volatility low-interest rate regime, where rough corners were lubricated by unprecedented central bank liquidity towards a “more normal” normal where fundamentals will be the primary drivers of equity valuations.

Escalation of trade wars have further unnerved investors this year. Indeed, compared to 2017, the first quarter of this year has been excessively eventful when it comes to trade. On Jan. 22, the Trump administration announced a 30% tariff on solar panels and a 20% tariff on washing machines, both hitting hard exports from China and South Korea. This move was followed up by steel and aluminum tariffs (25% on steel and 10% on aluminum), which were first hinted at in mid-February, announced unofficially on March 1 and approved on March 8. By the time March 8 rolled around, a number of concessions had been made to countries such as Canada and Mexico (our NAFTA partners), which are exempted for the time being. A number of other countries (EU, Australia, South Korea, Brazil and Argentina) were also exempted later as pressure mounted on the administration (the EU retaliated that it would slap tariffs on U.S. jeans and bourbon).

While the early tariffs were done in a rather chaotic and crude manner, those announced on China on March 22 (and officially imposed on April 3) encompassed not only a broader range of goods (1,300 products totaling \$50 billion), but also a more deliberate and careful approach, stemming from months-long

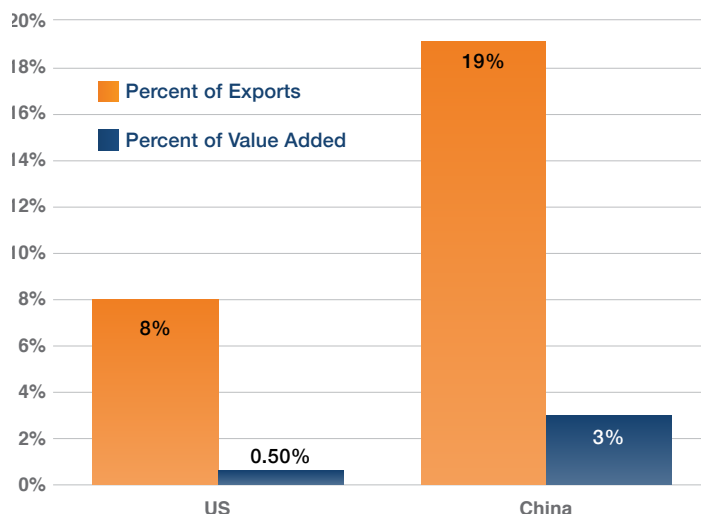
study into China's trade practices. Their intent is to address thornier issues such as intellectual property concerns and market distortions ranging from generous state subsidies, dumping, protection of local industries, and pressure on foreign firms to share technology. Not to be outdone, China announced its own tariffs on a list of 106 U.S.-made products, also totaling \$50 billion, in addition to earlier tariffs on \$3 billion U.S. goods (which came in response to the U.S. steel and aluminum tariffs). The U.S. responded by saying it is considering additional tariffs on \$100 billion of Chinese goods.

Not surprisingly, the blow-by-blow escalation on trade restrictions has wreaked havoc on financial markets. The Dow plunged a total of 1,200 points in two subsequent days in early April, after the administration formally announced its tariffs on Chinese goods, wiping out as much as \$1.4 trillion of wealth from global markets. It recovered afterwards as trade tensions ebbed, but it has remained highly sensitive to any trade-related news.

Our view is that market concerns about an imminent trade war are somewhat overblown, at least at this point. And while tariffs are too blunt of a cudgel to wield in an attempt to address subtle and sophisticated trade issues, for now, we consider the back-and-forth between the U.S. and Chinese officials as jostling for position in negotiations. The U.S. tariffs are a means to prod behavioral changes, not an end. The U.S. has imposed no deadline for tariffs to come to force and there will be a two-month period during which America's list is open for public consultation.

Indeed, trade wars would be quite painful for both countries: China's exports to the U.S. totaled \$430 billion in 2017, representing 19% of China's total exports and around 3% of total value added to the Chinese economy. Conversely, U.S. exports to China have shot up to \$130 billion, accounting for 8% of total exports and roughly 0.6% of total value added in the U.S. economy (Figure 7). And while this number may seem miniscule, there are other potential knock-on effects via declines in stock market (which directly impact U.S. household wealth) and Chinese holdings of U.S. securities (China holds \$1 trillion in U.S. Treasury securities). Should China start to unload some of its holdings (or merely threaten to do so) would cause a dramatic increase in bond yields which would have severe consequences for the U.S. economy. In short, we expect both countries to avoid a full-blown trade war and ultimately find a solution that would result in fairer but still free-trade, much like the hoped-for outcome in the negotiations to modernize the NAFTA agreement.

FIGURE 7
Bilateral Export Exposure: U.S. and China
(percent of total exports and value added)



The biggest threat to the forecast in our view stems from monetary policy. Though the U.S. economy is yet to overheat, things are certainly heating up buoyed by strong fundamentals, robust momentum and a large dose of fiscal support. These are precisely the times when policy mistakes are made: Monetary policy may tighten too fast or too late, prompting adjustments and risk repricing from the markets that may cut short the life of this expansion. This is not our baseline view as we expect the Fed to tighten at a measured pace though a bit faster than what is currently priced in by the market. However, the risks for policy mistakes have certainly risen as the economy enters its late stages of expansion.

ORANGE COUNTY AND SOUTHERN CALIFORNIA OUTLOOK

Before delving into the economic outlook for Orange County, we wish to point out a significant anomaly in the official state employment data for 2017. The California Employment Development Department (EDD), which produces estimates of monthly data, undertakes benchmark adjustments in February and March of each year to correct sampling errors in the previous year's data. Normally, these are small adjustments and do not appreciably affect the overall trends. However, the adjustment for 2017 was unusually large, with an increase of 12,700 jobs from 1,603,840 to 1,616,558 for Orange County. It increased the growth rate of employment from the initially reported .8% to 2% for 2017.

While these upward revisions are certainly welcome, such large adjustments create much havoc with forecasts as analysts based their 2017 projections on the EDD monthly estimates. Our revised forecasts here thus reflect corrections made in light of this error in the EDD data.

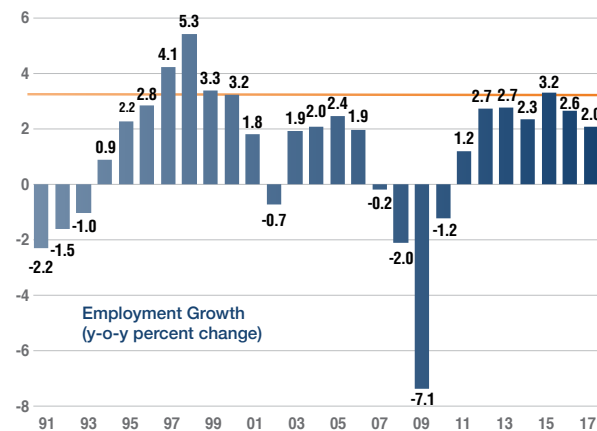
The state of California added 333,200 jobs in 2017, an increase of 2% compared to 2.7% in 2016 and 3.1% in 2015. While the upward trend appears to be slowing, historically, this is still quite a healthy growth rate considering that the 20-year average for the state is 1.3%. It indicates continued recovery of the state's economy from the Great Recession. The state unemployment rate fell to 4.7%, the lowest in the last 30 years.

Southern California counties of Orange, Los Angeles, Riverside, San Bernardino, Ventura and Imperial together added 136,700 jobs for a 1.8% increase in 2017 compared to a 2.7% increase in 2016 and 2.8% in 2015. The 20-year average rate of growth for the region is 1.2%. The average unemployment rate for the region fell to 4.7%, the lowest since 2006.

Keeping in line with the trends for the state and the nation, Orange County added 32,300 jobs in 2017 for a 2% increase compared to increases of 2.6% in 2016 and 3.2% in 2015 (Figure 8). The biggest gainers were education and health services, (9,700) constituting a 4.7% increase; leisure and hospitality services, (6,200) for a 2.9% increase; professional and business services, (4,800) for a 1.6% increase; and construction (4,300) for a 4.4% increase. Job growth in the professional and business services sector moderated during 2017 compared to 2016, from 3.6% to 1.6%, Growth in the leisure and hospitality sector declined from 4% to 2.9%, and construction from 6.2% to 4.4%. While the annual rate of total

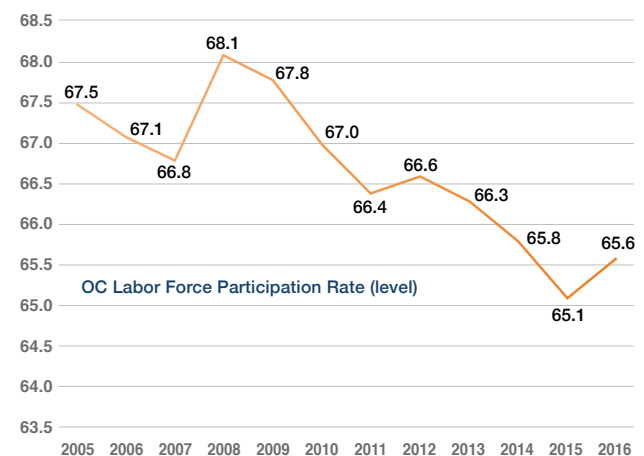
employment growth for the county slowed in 2017 compared to the previous two years, it still is higher than its 20-year annual average of 1.5%.

FIGURE 8
OC Job Growth Has edged Down but Is Above Historical Rate (nonfarm payroll, y-o-y growth rate)



The unemployment rate in Orange County fell to 3.5% in 2017 compared to an average annual rate of 4% in 2016 and 4.5% in 2015. This happened in spite of a growing labor force (more people joining the labor force either working or looking for a job). The labor force grew by an average of 1% during the 2015-2017 period and thus stood at 1,619,200 at the end of 2017, a level higher than prior to the crisis. While the unemployment rate in the county continues to head down, we don't see severe labor shortages yet because of improving labor force participation. After declining through the recession and in the early stages of the recovery, the rate of labor force participation appears to be heading back up (Figure 9). This is a reflection of similar trends nationally.

FIGURE 9
OC Labor Force Participation Rate Has Increased from Historical Lows (labor force participation rate, level)



Los Angeles County employment grew at the slowest rate in 2017 in the Southern California region, a 1.1% rate compared to 2.5% in 2016 and 2.2% in 2015. Construction employment growth slowed to 2.8% in 2017 from 6.1% in 2016 and leisure and hospitality growth fell to 2.7% from 4.8% in 2016. Employment in the information sector actually fell by 6.4% from staggering growth of 10.5% in 2016, the only major sector to show a decline in employment. LA County's unemployment rate averaged 4.7% in 2017, an improvement from 5.3% registered in 2016 and 6.6% in 2015.

The Inland Empire, made up of Riverside and San Bernardino counties, held its own in 2017 with a 3.5% job growth, just a hair below its 2016 pace (3.6%) but much lower than the stellar 5% rate posted in 2015. Employment growth in construction slowed to 5.5% in 2017 from 7.3% in 2016, while payroll jobs in the information sector shrunk by -1.4% compared to a pallid 0.5% gain in 2016. But job gains in the larger sectors, such as professional business services (up by 1.5% in 2017 from a decline of 1.6% in 2016) and in trade, transportation and utilities (up by 5.2% from a 4.5% increase in 2016) more than made up for the losses in other sectors. The average unemployment rate in the region fell to 5.1% in 2017 from 6% in 2016 and 6.6% in 2015.

The overall picture for 2017 has been one of continuing growth in all the counties of the Southern California region albeit at a slower rate than the previous two years.

Orange County Demographics, Migration and Housing

There have been a number of media reports recently highlighting several negative trends for the county: a relative slowdown in population, reduced in-migration, high housing costs and growing homelessness. These issues are somewhat

interconnected and it is helpful to critically review trends in these indicators to design effective policy responses. Population growth rates have been falling nationally and, in fact, are a universal feature of richer countries and regions. Orange County is no different: Population growth rates have declined from an annual pace of 1.7% in the 1990s to a current rate of 0.8% a year. Some of it may be attributable to the negative influence of the Great Recession and its aftermath. The total population growth is the sum of natural growth (births minus deaths) and migration, both domestic and international. The birth rate is slowing in the county and nationwide. In 2000, the birth rate in Orange County was 16.52 births/1,000 people, which declined to 12.71 births/1,000 people in 2010 and further to 12.01 births/1,000 people in 2016. But the migration data shows little change in its trend for OC.

Median age comparisons provide another window to the demographic picture. It appears that the median Orange County resident is older than in any other Southern California county or the state as a whole (Table 1). At 37.3 years, the median age for Orange County is just below the national median age of 37.7 years.

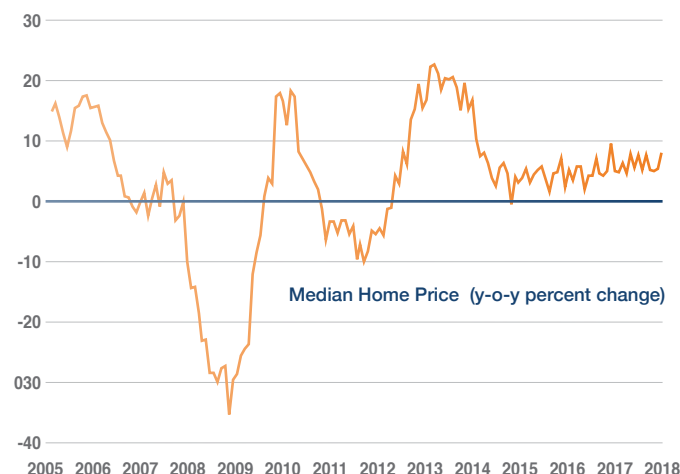
Housing prices have continued their upward march rising by an average pace of 6.3% in 2017 over the prior year (Figure 10). The median price in Orange County reached \$741,000 in March 2018, setting a record. On an annual basis, the median housing price in 2017 rose by 6.3% for Orange County, 7.6% for Los Angeles County, 9.1% for Riverside County and 7.9% for San Bernardino County. Housing sales, on the other hand, have been slow due to lack of supply, thus adding additional pressure to home prices. Combined with the relatively healthy local economic growth and slow new construction of single-family homes, it is not surprising that rapid housing price growth has continued through 2017 and into 2018.

TABLE 1
Median Age

		Orange	Los Angeles	San Diego	San Bernardino	Riverside	California	United States
2010	Median Age	35.7	34.3	34.5	31.2	33.4	34.9	36.9
	Percentile Rank	27.8	17.5	18.8	7.4	12.3		
2013	Median Age	36.4	35.1	34.8	31.9	33.9	35.4	37.3
	Percentile Rank	15.5	10.2	10.9	4.1	8		
2016	Median Age	37.3	35.8	35.3	32.7	34.8	36	37.7
	Percentile Rank	17.5	12	10.9	4.8	8.6		

FIGURE 10

OC Home Prices Have Appreciated Steadily
(CoreLogic Home Prices, y-o-y percent change)



But with maturing economic recovery and the expectation that the Federal Reserve will raise interest rates, it would not be surprising to see housing price growth moderate somewhat in 2018. Thirty-year fixed term mortgage interest rate as of mid-April 2018 stood at 4.47%, an increase of almost 50 basis points from January 2018. We expect housing prices in Orange County to appreciate another 5% in 2018 and 4% in 2019.

Construction activity has slowed down in Orange County but is continuing at a healthier pace in other parts of Southern California. Permits for construction in Orange County fell to 9,500 in 2017 compared to 12,100 in 2016, or a decline of 21.4%. But large increases in the Inland Empire (from 9,900 to 13,800) and Los Angeles County (from 19,900 to 22,000) led to an overall improvement in permits of 9% for the Southern California. Most of the future growth in construction will be coming from the Inland Empire and Los Angeles County. Given the current trends, construction permits for Orange County are expected to decrease to 8,400 in 2018 and 7,500 in 2019, which is the average rate of permits for the last twenty years.

Given the outlook for continued housing price increases, higher mortgage rates and tightening requirements, the condition of homelessness in Orange County will worsen before it gets better. The numbers of homeless has lately been on the rise in both LA and Orange County. In an odd way, the heightened homeless issue may be a reflection of high living costs and residents' reluctance to leave Orange County. Los Angeles County has undertaken significant efforts to alleviate the homelessness issue including a county-wide tax and other long-term efforts. However, Orange County has yet to fully appreciate in its public policy arena the full dimension of the problem before viable solutions can be devised.

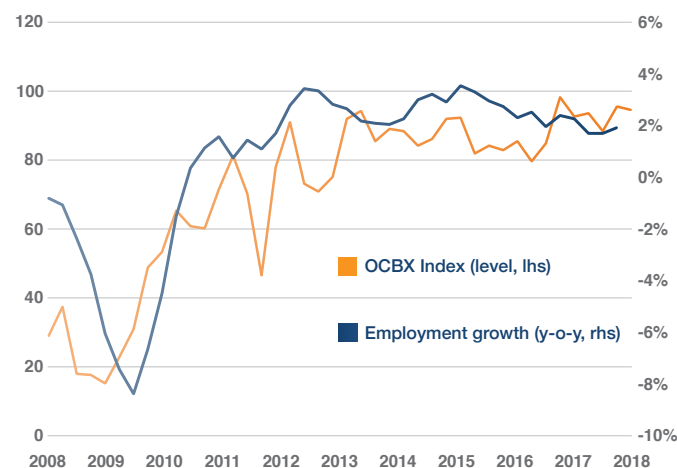
Forecast Outlook

Economic forecasts of necessity rely on trends in the past data. But when the historical data are subject to large error, as was the case in 2017 with the EDD data, it becomes all the more important to have multiple sources of information. One indicator for the local economy is local business leaders' expectations of growth. The Woods Center for Economic Analysis and Forecasting conducts a quarterly survey of business leaders' expectations of their own firm's growth and the growth of the local economy. The center calculates an overall measure called the OCBX Index, which is a combined score of leaders' expectations of their assessment on future growth for their own business and for the local economy. The index moves with the trend in local economic conditions, including jobs growth.

The OCBX index for the 2nd quarter 2018 stood at 94.4, a reading close to that of the first quarter. With a small dip in the last quarter of 2017, the index has been above 90 for the last six quarters indicating a continued positive outlook for the local economy (Figure 11).

FIGURE 11

OCBX Index and OC Employment Growth
(index level and payroll employment, y-o-y change)

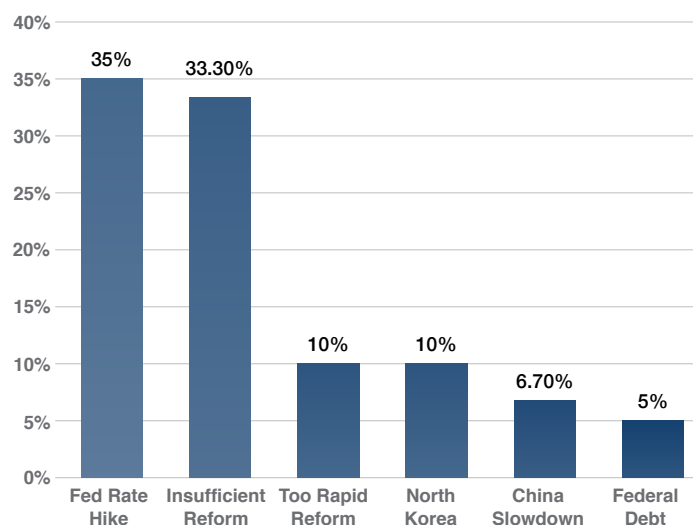


Business executives identified several factors as being significant to the expected future performance of their companies. After rating regulation as the most important in the last quarter, they again ranked the state of the economy as the most significant factor impacting their businesses in the second quarter 2018 survey. Government regulation continued to be a close second. The significance of labor costs jumped to twice the level it was in the quarter before and international competition also ticked up among the most important factors. Going forward, the state of the economy

and policy issues were ranked of equal high concern. This is not entirely surprising, given the recent actions on tariffs by the U.S. government.

The biggest threat to the businesses now is the anticipated Federal Reserve interest rate increases (Figure 12). Government regulation ranked second. Given the intense talk and actions on tariffs and the recent increase in the federal funds rate, it is not surprising to see these two threats rise to the top of their concerns. Risks from geopolitical activities, in particular from North Korea, have diminished. Interestingly enough, inflation does not appear to be high on their concerns in spite of increasing oil prices.

FIGURE 12
External Most Significant Concerns
(OCBX survey, percent of respondents)



Our forecasts for employment growth as outlined in Figure 13 are derived from the econometric models that we maintain, surveys of the Woods Center as well as other available information that impacts our region. Detailed tables for these forecasts are available from the Woods Center.

FIGURE 13
Employment Forecasts by County
(annualized rate)

